

often in company with *Gnatholabis hirsuta*, Ohaus, to which, in its general aspect and coloration, it bears a marked resemblance. It is remarkable, to an even greater degree than that species, for the extreme variability of its elytral coloration. Typically yellow, with a longitudinal black stripe on each elytron, dilating near the middle, the stripe is sometimes scarcely traceable, sometimes red instead of black, and sometimes interrupted in the middle. Occasionally the elytra are entirely black, whilst in pale and dark forms the legs may be either yellow or black. The pronotum and pygidium, as well as the lower surface, with the exception of a bare median line, are densely clothed with pale yellow hair, sometimes more or less rubbed away from pronotum and pygidium. The clypeus is more elongate than in the other species of the genus, the punctures of the pronotum do not coalesce transversely as in *N. ludificans*, the hind angles are rounded off, and the mesosternal process is strongly developed but not long.

XLII.—On Indo-Chinese Hymenoptera collected by R. Vitalis de Salvaza.—III. By ROWLAND E. TURNER, F.Z.S., F.E.S.

Superfamily ICHNEUMONOIDEA.

Family Evaniidæ.

Pristaulacus (Tetraulacinus) tonkinensis, sp. n.

♀. Nigra; antennis, articulis duobus apicalibus infuscatis, pedibusque flavo-testaceis; coxis posticis intermediisque nigris; abdomine nigro, segmento primo apice late, secundoque dimidio basali rufo-ferrugineis; alis flavo-hyalinis, stigmatе venisque fuscis; macula quadrata sub stigmatе fusca.

Long. 15 mm.; terebræ long. 23 mm.

♀. Head shining, very finely punctured; posterior ocelli about equidistant from the eyes and from each other, and more than twice as far from the hind margin of the head as from each other. Antennæ scarcely longer than the abdomen, the first joint of the flagellum scarcely half as long again as broad, the second twice as long as the first, the third distinctly longer than the first and second combined. Neck short, only a little more than half as long as

the distance between the tegulæ and the anterior margin of the mesonotum; pronotum unarmed. Mesonotum coarsely transversely striated, with a subtriangular depression in the middle of the anterior margin, beyond the apex of the depression a shallow and very narrow impressed line runs almost to the apex of the median lobe. Pleuræ coarsely and irregularly reticulate; scutellum and postscutellum transversely striated; median segment coarsely reticulate. First abdominal segment slender, nearly as long as the remainder of the abdomen, the apical half gradually, but very slightly, broadened and compressed laterally; the remaining segments distinctly compressed laterally and pale luteous brown at the apex. Intermediate and hind coxæ transversely striated; hind metatarsus nearly half as long again as the four following joints combined. Third transverse cubital nervure only fully defined at each end, the median portion indicated by a white scar; second transverse cubital nervure almost obsolete, only indicated by a short scar at the cubital end. Nervulus interstitial; lower abscissa of the basal nervure shorter than the upper, the basal nervure separated from the base of the stigma by a distance fully equal to its own length. First recurrent nervure received shortly before the apex of the first cubital cell.

Hab. Chapa, Tonkin; June (*R. Vitalis de Salvaza*).

This is allied to *rufobalteatus*, Cam., but differs in the much longer terebra, in the shorter apical joints of the hind tarsi, in the stouter and differently coloured antennæ, and in the yellower colour of the wings. I do not think that Kieffer's genus *Tetraulacinus* can be kept separate from *Pristaulacus*, the second transverse cubital nervure, on the presence of which it is founded, being almost obsolete.

Pristaulacus flavipennis, Cam.

Aulacus flavipennis, Cam. Proc. Manchester Lit. & Phil. Soc. xxvi. p. 134 (1888).

Aulacus magnificus, Schlett. Ann. Naturh. Hofmus. Wien, iv. p. 509 (1889). ♀ ♂.

Hab. Ceylon.

Dalla Torre suggests that *congener*, Westw., may apply to this species, but I have previously shown that *congener* is a synonym of *lateritius*, Shuck.

Evania kuchingensis, Cam.

Evania kuchingensis, Cam. Entomologist, xli. p. 237 (1908). ♂.

Hab. Hoabinh, Tonkin; October 5, 1917. 3 ♂♂.

Originally described from Borneo. Also occurs in Hong Kong.

Family Braconidæ.

Subfamily HELCONINÆ.

Brulleia euphemia, sp. n.

♀. Rufo-testacea; mandibulis apice, terebra valvulisque nigris; antennis 42-articulatis, nigris, articulis duobus basalibus rufo-testaceis, articulis 10-18 flavo-testaceis; alis flavis, tertio apicali leviter infuscatis, stigmatate venisque fuscis, venis basi rufo-testaceis.

Long. 20 mm.; terebræ long. 31 mm.; antennarum long. 14 mm.

♀. Mandibles stout, bidentate at the apex; clypeus finely punctured, short, transverse. Face much broader than long, rugose; front finely rugulose, short, concave but not deeply excavated; vertex finely punctured. Cheeks nearly half as long as the eyes; head broader than the thorax. Mesonotum finely punctured; notauli deep and crenulate; the posterior half of the mesonotum broadly depressed in the middle, the depressed portion with a median longitudinal carina and with coarse transverse striæ; scutellum finely punctured. Median segment nearly twice as broad as long, very coarsely rugose, becoming more or less reticulate towards the apex, the sides of the segment very coarsely reticulate. First tergite about three times as long as its apical breadth, slender, rugose; second tergite as long as broad, strongly but rather sparsely punctured, the remaining segments very finely punctured. Hypopygium not nearly reaching the apex of the abdomen; valvulæ thinly clothed with very short hairs. Hind metatarsus longer than the four apical tarsal joints combined, calcaria short, but stout. Second abscissa of the radius a little longer than the first, recurrent nervure received near the base of the second cubital cell, nervulus slightly postfural, discoidal cell sessile.

Hab. Tonkin; May, 1917.

Somewhat allied to *B. chinensis*, Turn., from N. China, but quite distinct.

Gymnoscelus rugidorsalis, sp. n.

♀. Nigra; antennis 32-articulatis, articulis 11-14 albidis; palpis pedibusque ferrugineis; femoribus posticis supra, tibiisque posticis apice nigro-suffusis; tarsis posticis articulis duobus basalibus albidis; alis hyalinis, iridescentibus, venis nigris. Long. 8 mm.; terebræ long. 5 mm.

♀. Face rugulose with a few strong longitudinal striæ; mandibles stout, bidentate at the apex, the inner tooth the longest; cheeks a little longer than the scape, strongly punctured. Third and fourth joints of the antennæ subequal. Front concave in the middle and smooth, the concave area reaching to the anterior ocellus and bounded laterally by carinæ, a low longitudinal carina between the antennæ; between the concave area and the eyes the front is finely rugulose. Vertex smooth and shining, head slightly narrowed behind the eyes, posterior ocelli half as far again from the eyes as from each other, nearer to the hind margin of the head than to the eyes. Lateral lobes of the mesonotum and the median lobe in front finely and closely punctured, from before the middle to the hind margin extends a broad and very coarsely reticulated area; notauli developed in front, but disappearing in the reticulated space. Pleuræ more or less coarsely reticulate. Basal half of the scutellum occupied by a deep depression, in which are several longitudinal carinæ, the apical half punctured. Median segment coarsely reticulate, with two longitudinal carinæ which do not reach the base, but are joined by a curved carina near the base. Abdomen sessile, first tergite nearly as long as the rest of the abdomen, nearly twice as long as its apical breadth, coarsely rugose-reticulate, the median area divided from the lateral areas by a well-marked carina on each side; the remaining tergites broader than long, smooth and shining. Hind coxæ and femora rather sparsely punctured, the femora without a spine. Second abscissa of the radius a little longer than the first, second cubital cell more than twice as long on the cubitus as on the radius; nervulus postfurcal. Anal cell of fore wing with two transverse nervures, the second indistinct and obsolescent.

Hab. Chapa, Tonkin; June 4, 1916.

In the condition of the second transverse nervure of the anal cell this forms a link between typical *Gymnoscelus* and Cameron's genus *Edyia*, which I think must sink as a synonym.

Family Ichneumonidæ.

Subfamily Pimplinæ.

Cyanoxorides erythrothorax, sp. n.

♂. Nigro-cæruleus; mandibulis apice, facie linea mediana, tibiis posticis, prope basin late albo-annulatis, tarsisque posticis nigris; tegulis pedibusque anticis intermediisque flavo-testaceis; thorace rufo-ferrugineo; mandibulis basi ferrugineis; facie utrinque late, macula orbitali utrinque supra antennis, orbitis externis; tergitis 3-5 macula angustissima transversa apicali, sexto septimoque linea longitudinali mediana albidis; alis hyalinis, leviter flavo-suffusis, venis fusco-testaceis.

Long. 14 mm.

♂. Very slender. Antennæ as long as the whole insect, 33-jointed, third joint short, only half as long as the fourth; the whole flagellum clothed with upright hairs, the apical joints not bent at an angle to the rest as is the case in the females of the genus. Clypeus very short; face closely punctured; front and vertex shining, with small scattered punctures, an acute tubercle between the antennæ. Pronotum depressed, deeply arched posteriorly, the angles acute, but not produced into spines. Mesonotum finely and closely punctured on the lateral lobes and on the anterior portion of the median lobe; the posterior portion of the median lobe reaching broadly to the scutellum and coarsely reticulate, with five distinct longitudinal carinæ; pleuræ closely punctured. Scutellum finely punctured, with a transverse smooth groove at the base, which is divided by a carina. Median segment greenish; the areola not divided from the petiolar area; no basal area; the external area well defined; the petiolar area transversely striated, the remainder of the segment more or less closely punctured; spiracles elliptical. Abdomen very slender; first tergite twice as long as the second, whitish at the extreme base, coarsely punctured-rugulose, extending beyond the apex of the trochanters. Second tergite twice as long as broad, coarsely punctured; the basal angles separated by a groove and forming small elongate-triangular spaces; the middle of the segment formed into a trapezoidal area bounded by deep grooves; third tergite longer than broad, the sculpture similar to that of the second tergite, fourth and fifth tergites subquadrate, more finely punctured, the median area convex, somewhat compressed laterally, making the segment subcarinate longitudinally in the middle; the two apical tergites

with a strong longitudinal carina, the depressed lateral spaces smooth and shining. Nervulus præfureal; second recurrent nervure very feebly curved, received just beyond the transverse cubital nervure, nervellus intercepted a little below the middle.

Hab. Luang Prabang; May 15, 1915. 1 ♂.

The sharp bend near the apex of the antennæ in this genus seems to be a sexual character, not found in the males. The genus does not seem to be separated from *Xylonomus* by any other good character.

Cyanoxorides vitalisi, sp. n.

♀. Nigro-cærulea; antennis 28-articulatis, articulis 12-16 albis, articulis 3-5 extus albo-lineatis; orbitis internis late, orbitisque externis dimidio inferiore flavidulis; tergitis primo basi extrema, tertio linea apicali in medio, quarto fascia angusta apicali, quinto linea apicali utrinque interrupta, sexto lateribus anguste, septimoque linea apicali lateribus dilatata flavo-ochraceis; palpis, pedibus anticis intermediisque, tibiisque tarsisque posticis flavo-testaceis; alis flavo-hyalinis, venis fuscis; terebra corpore æquilonga, valvulis fuscis, dimidio apicali ochraceis, apice extremo fuscis.

Long. 14 mm.

♀. Antennæ sharply elbowed at the base of the twentieth joint, the nineteenth joint with two slender spines at the apex, third joint almost as long as the fourth. Clypeus very short, face and clypeus closely punctured; front shining, smooth in the middle, without a tubercle, the sides of the front and the vertex finely punctured. Posterior ocelli as far from the eyes as from each other, and twice as far from the posterior margin of the head. Angles of the pronotum produced into minute tubercles; mesonotum as long as the scutellum, postscutellum, and median segment combined, very finely and closely punctured on the lateral lobes and on the front of the median lobe, the posterior half in the middle broadly, very coarsely, and irregularly reticulate. Scutellum very finely punctured, the basal transverse groove broad and divided by a low carina. Median segment without a basal area, the areola not separated from the petiolar area, punctured, spiracles elliptical, the spiracular area reticulate. Abdomen rather slender, the three basal segments rugulose, the apical segments closely and minutely punctured; first tergite about twice as long as the second, with two converging

carinæ near the apex ; second and third tergites with small spaces at the apical angles divided from the rest of the segment by an oblique groove, also with a raised space on each side diverging obliquely from the base and not reaching beyond the middle of the segment ; the second tergite half as long again as broad, the third subquadrate. Nervulus præfurcal ; second recurrent nervure received only just beyond the transverse cubital nervure.

Hab. Chapa, Tonkin ; June 21, 1916.

Allied to *annulicornis*, Cam., but differs in the colouring of the abdomen and hind legs, also in the longer and narrower second tergite.

Cyanoxorides annulicornis, Cam.

Epirhyssa annulicornis, Cam. Mem. Manchester Lit. & Phil. Soc. xliii. p. 133 (1899).

Xylonomus annulicornis, Morley, Fauna Brit. India, Hymen. iii. p. 80 (1913).

If the genus *Cyanoxorides* is kept apart from *Xylonomus*, this species must be included in it, the antennæ being sharply bent at the base of the twentieth joint. Morley evidently does not consider the distinctions as of generic value, though he does not discuss the question.

Hab. Hoabinh, Tonkin ; February, 1917. 1 ♀.

Pseudengalta aspasia, sp. n.

♀. Nigra ; antennis 39-articulatis, articulis 10-20 albidis ; scapo subtus, flagello articulis tribus basalibus subtus, facie, tegulis, macula sub tegulis, scutello macula magna, postscutello macula transversa, tergitis 1-7 fascia apicali, fascia sexta interrupta, tibiis anticis, tarsisque anticis articulis duobus basalibus flavis ; coxis, posticis apice nigris, trochanteribus femoribusque anticis intermediisque, femoribusque posticis basi testaceis ; tibiis intermediis, tarsis intermediis apice fuscis, tibiis posticis basi late, apice angustissime, tarsisque posticis, apice fuscis, albidoflavis ; alis hyalinis, flavo leviter suffusis ; venis fuscis.

Long. 15 mm. ; terebræ long. 9 mm.

♀. Eyes strongly convergent towards the clypeus ; face very finely punctured, nearly twice as long as its breadth at the base of the clypeus. Head subopaque, very finely and rather sparsely punctured, widely and shallowly emarginate posteriorly, swollen behind the eyes. Mesonotum subopaque, finely and closely punctured on the median lobe, much more sparsely on the lateral lobes ; the median lobe broadly

rounded at the apex near the middle of the mesonotum ; the apical portion of the mesonotum flattened in the middle and with four curved striæ, followed by several fine oblique striæ. Median segment coarsely reticulate, with a distinct longitudinal carina both above and below the large spiracle. Abdomen subpetiolate ; the first segment nearly twice as long as the second ; smooth and shining. Areolet with a short petiole, the recurrent nervure received at two-thirds from the base ; nervulus interstitial.

Hab. Muong Yon, Luang Prabang ; November 13, 1917.
1 ♀.

Very near *P. furcifera*, Bingham, from Luzon, of which the male only is described, but in that species the face is distinctly broader, the mesonotum much more strongly punctured, the median segment much less coarsely reticulate, and the longitudinal carina above the spiracle obsolete. I think these differences are specific, not sexual. There is also an oblique yellow fascia on the mesopleuræ behind in *P. furcifera*, which is absent in *aspasia*.

Subfamily *ICHNEUMONINÆ*.

Holcojoppa flavipennis, Cam.

Holcojoppa flavipennis, Cam. Entomologist, p. 181 (1902). ♀.

Hab. Vientiane, Laos ; July 30, 1915.

The localities of the specimens in the British Museum collection are Sikkim, Khasi Hills, and Hong Kong.

Superfamily *SPHECOIDEA*.

Subfamily *AMPULICINÆ*.

Ampulex varicolor, sp. n.

♀. Nigra ; segmento mediano, abdomine, mesosterno, coxis, femoribusque basi chalybeis ; thorace, segmento mediano lateribus, clypeo apice, scapo subtus flagelloque articulis 5 basalibus rufis ; alis hyalinis, anticis cellula radiali cellulisque cubitalibus prima apice secundoque basi infuscatis ; venis nigris, vena cubitali transversa prima oblitterata.

Long. 15-18 mm.

♀. Mandibles very long and slender. Clypeus very long and narrow, convex, but only distinctly carinate near the apex, produced at the apex into a broadly rounded process with a lateral tooth on each side ; the whole clypeus sparsely

and rather finely punctured. Eyes distinctly convergent towards the vertex, where they are separated by a distance about equal to the combined length of the third and fourth joints of the flagellum, but a little less than the length of the second joint of the flagellum. Front with three short, almost parallel, longitudinal carinæ, not nearly reaching the anterior ocellus, the space between the carinæ indistinctly obliquely striated; the front with obscure steel-blue patches. Head broadly rounded behind the eyes; vertex finely aciculate, opaque, divided by a shallow longitudinal groove, which extends almost to the posterior ocelli. Pronotum longer than broad, with a median sulcus, not raised or tuberculate posteriorly, opaque, without distinct sculpture. Mesonotum and scutellum subopaque, almost smooth, pleuræ finely and irregularly rugulose. Median segment a little longer than its median breadth, with the usual carinæ, the space between the carinæ strongly transversely striated, the third and fourth carinæ convergent at the base, the teeth at the apical angles of the segment very short and blunt. Second tergite a little longer than its greatest breadth; abdomen smooth and shining. Penultimate joint of the hind tarsi not extending as far as the middle of the apical joint. Fore wing with two cubital cells; second transverse cubital nervure reaching the radius at a distance from the apex of the radial cell equal to about half the length of the first transverse cubital nervure.

Hab. Annam, Kengtrap; November 27, 1917; Xieng Khouang, Ban Sai, December 8, 1918 (*type*).

The colouring and the exceedingly elongate clypeus render this species very conspicuous. In colour it is nearest to *A. ruficornis*, Cam., but differs in the steel-blue colour of the median segment and abdomen, in details of sculpture, and in the much greater size. I doubt if it belongs to the same group as *A. ruficornis*, both seem to mimic roughly the colouring of *Sima rufonigra*.

Subfamily PHILANTHINÆ.

Cerceris tonkinensis, sp. n.

♂. Brunneo-ferrugineus; capite, mesosterno, coxis basi, femoribus posticis, tibiisque posticis, basi ochraceis, nigris; vertice, antennis, mandibulis basi, clypeoque apice fusco-ferrugineis; tegulis, pedibus, segmento mediano macula magna utrinque arcaque basali flavo-ochraceis; segmento abdominali primo lateribus et subtus, tergitis 1-6 fascia apicali, sternito secundo subtus,

sternitisque 3-6 fascia transversa flavis; alis flavo-hyalinis, venis ferrugineis; clypeo apice dentibus tribus minutis armato; segmento mediano area basali nitida, impunctata; sternito secundo area basali elevata nulla; petiolo latitudine longiore; sternito sexto angulis apicalibus dente armato.

Long. 13 mm.

♂. Antennæ inserted a little more than half as far again from the anterior ocellus as from the base of the clypeus; the interantennal carina short, but strong; face below the antennæ and the clypeus with large sparse punctures; middle lobe of the clypeus much longer than its greatest breadth. Apical joint of the flagellum distinctly, but not very strongly curved, scarcely longer than the penultimate, and truncate at the apex. Vertex, temples, mesonotum, and mesopleurae closely and rather strongly punctured; scutellum and median segment rather less closely punctured; postscutellum very sparsely punctured. Abdomen rather deeply but not closely punctured; the first segment longer than its greatest breadth and strongly narrowed at the apex; sternites smooth; pygidial area parallel-sided, nearly twice as long as broad, truncate at the apex, sparsely punctured.

Hab. Tonkin; May, 1917.

The spines at the apex of the sixth sternite are short, the species resembles *C. vigilans*, Sm., in the form of the clypeus and pygidial area.

Philanthus angustatus, sp. n.

♂. Nigro; clypeo apice anguste, macula curvata inter antennas, pronoto margine postico, tegulis, callis humeralibus, scutello macula magna, postscutello macula parva transversa, tergito secundo macula apicali transversa utrinque, tergitis 3-5 fascia angusta apicali, tibiis anticis intermediisque supra, tarsisque flavis; articulis tarsalibus apice nigris; alis hyalinis, venis nigris; abdomine petiolato.

Long. 10 mm.

♂. Clypeus very broadly rounded anteriorly, closely punctured, and clothed with long whitish hairs, a row of stout blackish setæ springing from beneath the clypeus. Head very closely punctured-rugulose, opaque; posterior ocelli nearly twice as far from each other as from the eyes. Antennæ very little longer than the thorax without the median segment, the apical joint rounded at the apex. Thorax and median segment closely and rather strongly punctured. Abdomen sparsely punctured; first tergite more

than half as long again as the second, forming a slender petiole, gradually widened towards the apex, where it is nearly twice as broad as at the base; second tergite at the apex at least four times as broad as the apex of the first. Second transverse cubital nervure almost vertical. Tarsi very slender, much longer than the tibiae.

Hab. Chapa, Tonkin; June 5, 1916. 1 ♂.

This approaches the genus *Trachypus* in the petiolate form of the first tergite; but has not the sharply truncate apical antennal joint characteristic of that genus. It is, however, very distinct in the form of the petiole from any Oriental *Philanthus*. The two species described by Bingham from Aden under *Trachypus* (Journ. Bombay Nat. Hist. Soc. xii. p. 107, 1898) belong to *Philanthus*, and have not the petiolate abdomen of this species.

XLIII.—A List of the Myriapoda of Ulster.

By NEVIN H. FOSTER, F.L.S., M.R.I.A.

THE word Myriapoda as here used must be merely understood as a convenient designation for an assemblage of many-legged arthropods. Prof. Carpenter has shown* that the time-honoured "Class Myriapoda" of P. A. Latreille ought to disappear from systematic zoology, and that the Orders embraced in this old Class are each worthy of Class rank.

In the compilation of this list the following papers &c. have been consulted:—Loudon's Mag. of Nat. Hist., 1836, p. 12; "Irish Myriapoda" (Pocock), 'Irish Naturalist,' vol. ii.; "New Irish Myriapods" (Selbie), *ibid.* vol. xxi.; "New Records of Irish Myriapods" (Selbie), *ibid.* vol. xxii.; "Irish Myriapoda" (Johnson), *ibid.* vol. xxii.; "Distribution of Symphyla" (Foster), *ibid.* vol. xxiv.; "Notes on Myriapoda" (Brade and Birks), *ibid.* vol. xxv.; B. N. F. C. 'Proceedings,' ser. 2, vol. vii.; Royal Irish Academy 'Proceedings,' vol. xxxi.; &c.

It is remarkable that Thompson's 'Natural History of Ireland' contains no reference to the Myriapoda. The fourth volume, which includes the Invertebrates, was published in 1856, twenty years after Templeton's notes appeared in Loudon's 'Magazine.'

* 'Irish Naturalist,' vol. xxv. p. 164.